

Raja Ben Hajria

Doctor in Mathematics

Education

- 2015–2019 **Ph.D. in Mathematics**, *Faculty of Sciences of Monastir*, Tunisia.
Title: Contribution to the statistical analysis of autoregressive processes. Under the supervision of Pr. Hamdi Raïssi and Pr. Hedi BelHadj Salah.
- 2012–2014 **Research Master in Mathematics and Applications**, *Faculty of Science of Monastir*, Tunisia.
Title: Testing for breaks in variance structures with smooth changes. Under the supervision of Pr. Hamdi Raïssi and Pr. Leila Ben Abdelghani.
- 2009–2011 **Professional Master in Mathematical Engineering and Statistics**, *Higher Institute of Informatics and Mathematics of Monastir*, Tunisia.
Title: P-Star Model: A Leading Indicator of Inflation for Tunisia. Under the supervision of Pr. Jeguirim Khaled and Mr. Fadhel Saddem (BCT).
- 2006–2009 **License in Mathematics and Applications**, *Higher Institute of Informatics and Mathematics of Monastir*, Tunisia.

Published articles

- Ben Hajria, R., Khardani, S., and Raïssi, H. (2018). Testing for abrupt breaks in variance structures with smooth changes. *Communications in Statistics - Theory and Methods*, 1-18.
- Ben Hajria, R., Khardani, S., and Raïssi, H. (2018). A power comparison between autocorrelation based tests. *Statistics and Probability Letters*, 143, 1-6.

Work in Progress

- Ben Hajria, R. (2019). Corrected LM tests for AR models with time-varying variance.
- Ben Hajria, R. and Raïssi, H. (2019). Model specification for processes with non constant variance and risk measurement in finance.

Traineeships

- 09/09/2019- **Henri Poincaré Institute (IHP)**, *France*.
10/10/2019 Participation at the Mathematics of Climate and the Environment Trimester at IHP.
- 09/12/2018- **University of Trento**, *Italy*.
30/01/2019 Enrolled as an incoming exchange student in the framework of the BigPro project Scambi Giovanili MAECI under the supervision of Professor Farid Melgani.

- 01/04/2017- **Instituto de estadística, Pontificia Universidad Católica de Valparaíso, Chile.**
29/04/2017 Subject: A power comparison between autocorrelation based tests, under the supervision of Pr. Hamdi Raïssi.
- 15/04/2015- **INSA Rennes, France.**
15/07/2015 Subject: Testing the lag length of autoregressive processes: A comparison between port-manteau and Lagrange multiplier tests, under the supervision of Pr. Hamdi Raïssi.
- 15/04/2014- **INSA Rennes, France.**
15/07/2014 Subject: Testing for breaks in variance structures with smooth changes, under the supervision of Pr. Hamdi Raïssi.
- 01/06/2010- **Central Bank of Tunisia, Tunisia.**
30/08/2010 Subject: P-Star Model: A Leading Indicator of Inflation for Tunisia, under the supervision of Pr. Jeguirim Khaled and Mr. Fadhel Saddem (BCT).

Teaching Experience

- 2018-2019 **Master 1 Mathematics, Faculty of Sciences of Monastir, Tunisia, Statistics with R programming.**
- 2019-2020 **L1 Mathematics, Faculty of Sciences of Monastir, Tunisia, Statistics with R programming.**
- 2019-2020 **L1 Physics and Chemistry, Faculty of Sciences of Monastir, Tunisia, Algebra.**

Reviewers Activities

- 2018-present **Cogent Mathematics & Statistics journal.**

Participation at conferences and seminars

- E-M2019 Conference of the Euro-Maghreb International Research Network in Mathematics and Applications, Spain.
- SFDS2019 Summer School in Statistics and Data Science for Young Researchers in Africa.
- CISEM2019 Colloque International de Statistique et Économétrie, Tunisie.
- MSDM2018 Meeting on Statistics and Data Mining in Hammamet, Tunisia.
- CISEM2017 Colloque International de Statistique et Économétrie, Tunisie.
- SMT2016 Le 21ème colloque de la société mathématique de Tunisie.
- MSDM2015 Meeting on Statistics and Data Mining in Hammamet, Tunisia.

Programming Skills

- R, Python and MATLAB.